

Ms. Katie Zakutansky is a Senior Consultant and biomechanical engineer at Engineering Systems Inc. (ESi), where she specializes in the application of biomechanics across a broad range of industries, including transportation, consumer products, marine, recreational, and medical devices.

Her expertise encompasses biomechanical analysis, injury mechanisms, accident investigation, risk assessment, and human performance evaluation. Ms. Zakutansky is actively involved in investigative and hands-on research to understand how individuals interact with various environments and systems. Her professional background also includes failure analysis, product research and development, and the analysis of human performance under a variety of conditions. Ms. Zakutansky brings a rigorous, interdisciplinary approach to each case and project, integrating engineering principles with human factors expertise.

### Education

B.S., Biomedical Engineering - Biomechanics, Marquette University, 2016

### Positions Held

#### **Engineering Systems Inc., Fort Myers, Florida**

- Senior Consultant, 2026 – Present
- Senior Staff Consultant, 2024 – 2025
- Staff Consultant, 2020 – 2023

#### **Floyd Inc., Detroit, Michigan**

- Product Design Engineer, 2019

#### **Zimmer-Biomet, Warsaw, Indiana**

- New Product Introduction Design Quality Engineer, 2017 – 2018
- Development Engineer, 2016 -- 2017

#### **South Shore Marina, Portage, Indiana**

- Staff Engineer, 2016

### **Contact Information**

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(239) 842-0500

### **ESi Fort Myers**

12750 Commonwealth Drive  
Fort Myers, FL 33919

### **Areas of Specialization**

- Biomechanical Accident Reconstruction
- Human Factors and Ergonomics
- Injury Analysis
- Medical Devices
- Product Safety and Design
- Safety and Risk Assessment
- Sports and Fitness Equipment
- Experimental Testing

### Trek Bicycle, Waterloo, Wisconsin

- Mechanical Engineering Co-Op, 2014 – 2016

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### Continuing Education

- **Passenger Restraint Safety Systems** -- Institute of Police Technology and Management, University of North Florida, Aurora, IL, 2025
- **Pedestrian/Bicycle Investigation I** -- Institute of Police Technology and Management, University of North Florida, Miami, FL, 2024
- **Event Data Recorder Update and Analysis** -- Ruth Consulting, Norcross, Georgia, 2022
- **Mycometer Surface Fungi, Mycometer** -- Norcross, Georgia, 2022
- **Human Factors in Traffic Crash Reconstruction** -- Institute of Police Technology and Management, Miami, Florida, 2022
- **Traffic Crash Reconstruction** -- Northwestern University Center for Public Safety, Norcross, Georgia, 2022
- **FARO 3D Scanner Certification**; FARO -- Norcross, Georgia, 2021
- **OSHA 30-Hour General Industry Health and Safety Certification** -- University of South Florida, Tampa, Florida, 2020

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### Professional Affiliations/Honors

American Association of University of Women, Member  
American Boat and Yacht Council (ABYC), Member  
American Society of Biomechanics (ASB), Member  
ASTM International – Subcommittee F15.82, Member  
ASTM International – Subcommittee F27, Member  
Pi Mu Epsilon (Mathematics Honor Society), Member  
Professional Ski Instructors of America & American Association of Snowboard Instructors (PSIA-AASI), Member

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### Supplemental Certifications

Forklift Certified Operator, 2022  
First Aid Certified / Basic CPR Certified & Certified in Basic Life Support  
PADI Open Water Certified SCUBA Diver, 2013  
Six Sigma Yellow Belt, 2017

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### Selected Technical Investigations

Amusement Parks and Other Recreational Land and Water Sports  
Bicycle Protective Equipment  
Biomechanical Analysis of Low-Speed Vehicle Crashes

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Consumer Products (Household Appliances, Toys, Active Lifestyle Equipment, etc.)  
Evaluation, Review, and Update of Owner's Manuals and On-Product Labels  
Medical Devices (Orthopedic Implants, Assistive Device Design, etc.)  
Night-time Visibility / Conspicuity and Visibility Obstructions  
Pedestrian / Vehicle and Bicycle / Vehicle Crashes  
Pediatric and Adult Surrogate Testing  
Snow Sport Injury Consistency Analysis  
Sports and Fitness Equipment  
Water Intrusion Injury Testing

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## Publications

"When a Flashlight Looks Like a Threat: A Multifaceted Human Factors Approach in the Accident Reconstruction of a Police Officer Shooting." M. Meza-Arroyo, G.A. Hazime, **K.B. Zakutansky**. International Society for Occupational Ergonomics & Safety, XXXVIIth Annual Occupational Ergonomics and Safety Conference, Orlando, FL. July 2025.

Brickman, D.B., Mohorovic, J.P., **Zakutansky, K.B.**, Mathias, A.C., Shibata, P.A., "Aboveground Swimming Pool Child Access Prevention Through Product Design," Proceedings of the XXXVIth Annual International Occupational Ergonomics and Safety Conference, Denver, CO, August 5-6, 2024.

Brickman, D.B., Kruger, D.H., Loomis, S.P., **Zakutansky, K.B.**, McGillicuddy, J.S., Thibault, B.A., "Industrial Tugger 3-Dimensional Convergence Accident Reconstruction Technology," Proceedings of the XXXVIth Annual International Occupational Ergonomics and Safety Conference, Denver, CO, August 5-6, 2024.

Winkel, E. S., **Zakutansky, K.B.**, Schirrmann, M., Breen, K. C., Taylor, R. K., "Water Intrusion Injuries: Occupant Kinematics and Pressure Exposure During Rearward Falls from a Personal Watercraft", Society of Automotive Engineers, Journal of Transportation Safety, 11(1), 2023.